TOLKIEN’S TONGUES:
THE PHONETICS AND PHONOLOGY OF TOLKIEN’S QUENYA LANGUAGE

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ABSTRACT

J.R.R. Tolkien, author of *The Lord of the Rings* and other Middle Earth tales as well as Oxford professor of linguistics, constructed over 14 languages in the development of the background of his stories. This thesis will seek to understand Tolkien’s linguistic experiment of Quenya, first in its historical context, and then assess its linguistic merit and behaviors.

In the first few sections, Tolkien’s linguistic and academic background will be investigated, setting the scene for further linguistic analysis. This thesis then explores how the authentic nature of the language is developed and evoked through the phonetics and phonology of Tolkien’s Quenya, using the poem “Namárië” from *The Fellowship of the Ring* for analysis. Smith (2010:7) argues that Tolkien created a “flowing,” “light and melodious” language, designed much like a Romance language, with no “potentially harsh” phonemes or “brusque English consonant clusters.” But with such claims must come evidence. This thesis provides the background research Smith (2010) lacks behind these claims, defining Quenya as a functional language, with clear patterns and tendencies towards particular phonetic and linguistic behaviors.

* Special thanks to: my advisors Professors Nathan Sanders (Linguistics) and Maud McInerney (English), Sofia Berlin and Lisa Bao, the library staff, particularly Jeremiah Mercurio, and Lizzie Carp and Bobby Brooks, for their ‘Excel-lent’ help in creating graphs. Thanks also to my close friends, who have pushed me to explore nerd culture all my life.
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1 INTRODUCTION

J.R.R. Tolkien, most famous as the author of *The Hobbit* and *The Lord of the Rings*, was more than simply a writer: he was an accomplished linguist. Tolkien created at least fourteen different languages for his fantasy realm of Middle-Earth, developing some, like his Elvish languages (e.g. Sindarin and Quenya), into developed language families. His mastery of at least seven real-life languages, including his personal favorites, Welsh (his ancestral tongue) and Finnish, gave him the ability to authentically ground his inventions, as he used a variety of linguistic characteristics from different languages in his constructed languages (or conlangs). Tolkien created these Elvish languages as part of his exploration of beauty and harmony in words and meaning, calling his perspective “linguistic aestheticism,” (Tolkien 1931). Linguistic aestheticism, Tolkien’s personal philological philosophy, meant that he found pleasure in the phonetic “fitness” of connecting sound to meaning (Smith 2006). Tolkien himself believed his books on Middle-Earth were “largely an essay in linguistic aesthetic” (Carpenter 1981), and sought to combine sound and sense in a literal way within his invented languages. In this thesis, I seek to explore Tolkien through his writings, considering him not solely as an author, but primarily as a language enthusiast and linguist.

Tolkien’s passion for languages filled his entire life, and his dedication to creating a family of realistic languages with historical connections and linguistic adjustments throughout history, is evident. This thesis seeks to understand the phonetics and phonology of Tolkien’s attempt to create his Elvish (using Quenya as the example) as a structured and functioning aesthetically pleasing language. First, I will explore Tolkien’s linguistic and academic background as a conlang creator (conlanger), setting the scene
for further linguistic analysis. Then, I will analytically investigate Quenya phonetically and phonologically, testing the findings of Smith (2010:7), which asserts that Quenya is “light” and “flowing”. I seek to find an analytic foothold for Smith 2010’s argument in the language itself, using the poem “Namárië” for evidence. In “Namárië,” Quenya’s phonetic properties include: a great tendency towards sonorant phones and event spacing of vowels and consonants, with short syllables, few closed syllables, and no consonant clusters, such as in the word *sindanoriello*, or [sin.da.no.ri.el.lo]. By way of structural and phonological analysis, vowel harmony is measured, using Harrison and Sanders’ 2012 application, and Tolkien’s own vowel formants while reciting “Namárië” are analyzed through Praat and developed into a vowel chart, to illustrate the design (or lack thereof) of the sounds of Tolkien’s Quenya.

In performing these linguistic analyses, we may discover in what way Tolkien manipulated his knowledge of existing languages to serve his linguistic experiments. Without the tools of technology that are available today, was Tolkien able to create a believable, functional conlang, in Quenya?

2 **Tolkien Biography**

John Ronald Reuel Tolkien was the very definition of a Renaissance man. Born in South Africa in 1892, Tolkien grew up and spent most of his life in England, serving as a student, Oxford scholar, deep and passionate Catholic, soldier, dictionary writer, author, tutor, editor, English professor and lecturer, and Oxford don. Most of the world knows Tolkien as the author of *The Hobbit*, *The Lord of the Rings*, and *The Silmarillion*, all of which were set in the fictional realm of Middle-Earth.
But while Tolkien garnered the most popular acclaim for his Middle-Earth stories and characters, his role as a linguaphile and conlanger is an essential facet in the study of his life. A professor of philology in the English faculty at Oxford at a time when literature and language were at odds in the school, Tolkien was well versed in a number of languages, including his specialty, Anglo-Saxon. But Tolkien studied much more than just Old English. From an early age, Tolkien’s mother exposed him to a great deal of languages, for which Tolkien expressed a quick aptitude and great appetite. As an academic and a philologist, he delved deeply into the realm of historical linguistics, exploring the characteristics of Russian, Spanish, French, Greek, Latin, and Old Norse, among others. He was intrigued by the creation of myths and nationalistic mythologies, and the role that language played in the creation of myth. But particularly, Tolkien’s linguistic passions were set afire when he discovered and began to study two languages: Finnish and Welsh.

Finnish and Welsh captivated Tolkien. They both possessed, in his mind, “a very characteristic and in their different ways beautiful word-form” (Tolkien 1931). Tolkien was obsessed with words and language all his life, and the beauty he found in words struck him. As a child, Tolkien experimented with words and mythologies, testing out manners of scientifically creating pleasure through sound and speech manipulation. He invented small-scale conlangs with his friends and his brother, Hilary, which demonstrated increasing sophistication as he gained experience with natural languages: from the simple Animalic, to the linguistically pleasing Nevbosh, to the Latin- and Spanish-based language Naffarin (Tolkien 1931).
But Tolkien did much more than just write stories and enjoy personal linguistic inventions. Creating structures and vocabulary for roughly fourteen different languages, he utilized his knowledge of real foreign tongues to ground his fictional stories in a basic history, a mythology, and anthropological nuance. Tolkien saw language invention not just as an artistic pursuit, but also as a scientific one: languages must have patterns, must be understandable and rational. Walking the line between artistic expression of beauty and accurate linguistic structure, Tolkien welcomed the connection of art and science in his language innovation, as his technical background spanned both disciplines. He explains his manner of writing as a cobbbling-together of what one already knows:

One writes such a story [as *The Lord of the Rings*] not out of the leaves of trees still to be observed… It grows like a seed in the dark out of the leaf-mould of the mind… No doubt there is much selection… what one throws on one’s personal compost-heap; and my mould is evidently made largely of linguistic matter.

(Carpenter 1977)

Tolkien’s narrative creation developed from his massive wealth of knowledge of and experience with different mythologies and languages. Because of his strong background in languages, Tolkien was able to propose a fictional invention that in many ways does resemble a possible natural language in a number of ways. His exploration of the theme of beauty finds an application in his invention of the Elvish languages Quenya (the older, High-Elvish literary language) and Sindarin (the more modern Grey-Elvish), loosely based on Finnish and Welsh, respectively. These languages are in some ways more central to his tales than even the characters themselves. Indeed, Tolkien’s conlangs preceded the development of his stories and characters: he first created the languages, then developed a people “to whom [the languages] belonged” (Carpenter 1977), and then finally wove a narrative out of the speakers of these languages.
3 Constructed Languages and Tolkien

Language creation is by no means a new phenomenon, or one that took shape with Tolkien. According to Okrent (2009), the first documented occurrence of structured, coherent experimentation with language was Lingua Ignota, created in the twelfth century by Hildegard von Bingen, a German nun. Lingua Ignota was designed as a secret language to be used by nuns. Prior to von Bingen’s conlang, instances of language invention were performative, spontaneous, and non-patterned, as in glossolalia (the religious act of speaking in tongues). Lingua Ignota, with its real, translatable, and intentional organization, flow, and design, was an evolutionary leap forward.

Okrent categorizes the later progression of conlangs into four historical phases, based on viewing language from the perspectives of science, peace-building, logic, and artistic expression (see Figure 1).

<table>
<thead>
<tr>
<th>Type of Language</th>
<th>Time Period</th>
<th>Example Conlang(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific</td>
<td>1600s-1700s</td>
<td>John Wilkin’s <em>Philosophical Language</em></td>
</tr>
<tr>
<td>Peace-building auxiliary</td>
<td>1700-1920s</td>
<td>Esperanto, Interlingua</td>
</tr>
<tr>
<td>Logical</td>
<td>1930s to 1980s</td>
<td>Loglan, Láadan</td>
</tr>
<tr>
<td>Artistic expression</td>
<td>1980s-present</td>
<td>Klingon, Na’vi</td>
</tr>
</tbody>
</table>

Figure 1: Historical Progression of Conlangs

Conlangers have often sought to make up for some perceived deficiency in natural languages. Conlangs are seen to be most successful when they work with a defined problem of natural languages, while still adhering to a level of known linguistic behaviors of natural languages. The early conlangers wanted to scientifically understand the world through language, like Wilkin’s *Philosophical Language*, by designing a hierarchical structure for all words, under the assumption that structured language would provide structured insight into the nature of reality. Esperanto, a conlang created in the 1800s that
rose to prominence in the early 1900s, was designed as a unifying, peace-building
element for all countries.¹ Logical languages like Láadan (a “woman’s” language) or
Loglan (a streamlined and disambiguated language) were created with unique or new
properties in syntax or semantics, to fill a linguistic gap or to explore a new (practical)
use for language, again assuming a connection between language and thought: using a
logical language was supposed to lead to logical thought. And indeed, the popular
conviction that mindset, culture, and perspective are all produced by language persists to
this day. This belief was common around the world in the mid-twentieth century,
throughout World War II and the subsequent global cultural and economic revolutions.
But from about the 1980s onward, conlangers began to find exploration of language to be
a unique art form unto itself, constructing languages for science fiction novels or movies
like the alien warrior-people’s tongue of Klingon in the Star Trek franchise and Na’vi in
the film Avatar.

Tolkien, however, does not easily fit into Okrent’s conlang timeline. While it is
clear from his notes and writings that he considered his languages artistic in nature,
chronologically Tolkien’s writings are situated at least 50 years earlier than the 1980s
start of the artistic expression phase. It appears that in light of the other conlangs
surrounding Tolkien’s works in the twentieth century, Tolkien was “a man before his
time,” as Smith (2010) believes, the artistic ancestor to the creators of Klingon, Na’vi,
and other modern conlangs.

¹ Tolkien himself mentioned in his 1931 essay “A Secret Vice” that he was in support of a language like
Esperanto becoming a more prominent language in Europe.
Tolkien’s creation of the world of Middle-Earth was built from the foundation of his linguistic efforts, not vice versa. He wrote that his *The Lord of the Rings* narrative was “largely an essay in ‘linguistic aesthetic,’” as it was “fundamentally linguistic in inspiration” (Tolkien 1981). Although most of the books are accessible to readers regardless of readers’ knowledge of any language besides English, Tolkien’s imagined linguistic history and some real Quenya and Sindarin words and texts show up throughout the story, in a highly developed state. Quenya can be seen in Tolkien’s works through poetry, such as the poem “Namárië” (“Farewell”), spoken by the elf Lady Galadriel in *The Fellowship of the Ring*. Sindarin is found in the books primarily just in names, like Aragorn (“Reverend King”) and Legolas (“Green Leaf”). The hobbits, the main characters of the story and speakers of the Common Tongue (written as English), only experience moments of relation to and translation from the Elvish languages. In his letters, Tolkien states that he would have “preferred to write in ‘Elvish,’” but chose instead (from his editors’ suggestion) to write as little of the book in Elvish as possible, so as not to alienate readers (Tolkien 1981). Tolkien’s conlangs are far more developed than can be seen in the actual text of the books; even Tolkien’s work in the appendices to *The Lord of the Rings* is only just part of what he created for himself. As the popularity of Tolkien’s books grew, fans expressed their desire for a more complete picture of languages like Quenya and Sindarin. But only in 2010, nearly forty years after Tolkien’s death, when Christopher Gilson revived the Elvish Linguistic Fellowship and its periodical *Parma Eldalamberon*, were Tolkien’s complete notes made public, revealing the full extent of his lifelong passion for conlanging.
Using the poem “Namárië,” and the appendices to *The Return of the King*, I list the full set of consonant and vowel phonemes in Quenya (Figures 2-4). Although Quenya is written relatively phonemically in Roman script for the books, I transcribed the entire poem into a modified version of the International Phonetic Alphabet (IPA) to facilitate linguistic analysis and comparison. A reproduction of the complete poem “Namárië”, in Quenya and with both modified IPA transcription (syllables included) and English translation, is available in the Appendix.

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Coronal</th>
<th>Palatal</th>
<th>Velar</th>
<th>Labiovelar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plosive</td>
<td>p</td>
<td>b</td>
<td>t</td>
<td>d</td>
<td>k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>f</td>
<td>v</td>
<td>s</td>
<td>ss</td>
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<td>Nasal</td>
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<td>Lateral</td>
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<tr>
<td>Glide</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>j</td>
<td>w</td>
<td>k\textsuperscript{w}</td>
</tr>
</tbody>
</table>

Figure 2: Consonants of Quenya

![Figure 3: Monophthongs of Quenya](image-url)
While Sindarin and Quenya were based chiefly on Welsh and Finnish, and were created by an English speaker (likely giving them a privileged relationship to English language linguistics), they took many of their characteristics from other languages and grammars. Fisher (2010:5) explains that Tolkien had a preference for connecting many foreign meanings and layering them on top of each other: “In Tolkien’s… language, Sindarin, the word [Mordor] signifies the ‘black land, dark country,’ but in Old English mordor was equally dark, meaning ‘murder.’” Tolkien employed parts of the phonetics and phonology of many existing languages to invent his new one; it was not merely a process of substituting Welsh for Sindarin, and Finnish for Quenya, but rather a more nuanced approach, one that took into account the meanings evident in different languages and cultural mythologies—all towards the purpose of linguistic aestheticism.

The concept of linguistic aestheticism, however, raises questions about Tolkien’s role as a linguistics professor and academic. Why did Tolkien choose to write a fantasy narrative using linguistic aestheticism, rather than involving himself in the writing of academic critical linguistic theory, as many of his fellow professors had? Smith (2010) provides some analysis of the functionality of the language, and the manner in which it conveys Tolkien’s ideas of linguistic beauty and harmony. Though Tolkien was a professor of philology, his name is surprisingly absent from critical debate in the era, which principally focused on such famous figures as Saussure and Chomsky. Saussure, a structuralist, believed that the forms of words had little relation to the meanings they conveyed, and that the relationship between words, the structure, was of primary
importance. According to Smith, Tolkien felt the academics in linguistics would not take kindly to his idea of linguistic aestheticism, as it explored anti-structuralism to an extreme degree, in designing an entire language system on feelings associated with word forms. Quenya, therefore, was an experiment, using sound symbol-like word form to promote anti-structuralism, but presented through a medium that was geared to a less critical public, rather than to other academics in Tolkien’s field, for “fear of humiliation” (Smith 2010: 2).

Smith (2010: 7ff) does attempt to provide a phonological analysis of Quenya, using “Oilima Markirya,” a poem in “A Secret Vice,” to demonstrate his claims. Smith offers up the following “linguistic characteristics” as evidence of Quenya’s pleasing sound:

- lack of “brusque” English-style consonant clusters
- lack of “hard, guttural phonemes”
- use of only three fricatives, “soft /f/ and /v/… [and] non-sounded /s/”
- even spacing of consonants and vowels within syllables
- strong preference towards “high-sounding front vowels”
- strong dispreference for words longer than three syllables

As Smith goes on to say, these qualities lend a “flowing,” “light and melodious” feel to the language, like that of “the most beautiful of European languages,” Spanish and Italian. And for a literary analysis, perhaps these claims would be enough to prove a point. But this description of Quenya, for all its flourishes and grandiose claims, has little linguistic weight without rigorous analysis as a foundation. Indeed, it is somewhat problematic. What does “potentially harsh fricatives” mean? How can one quantify a
“light and melodious” sound? Can the relationship between Italian/Spanish and Quenya be measured or explained? No matter how we desire to use Quenya, the place where it is spoken most completely is in poetry, which is by its own nature focused on “beautiful” words, phonemes, and sounds. To what extent must the reader understand this language to be poetic in nature, and what role does that play in its beauty?

To understand Quenya, of all Tolkien’s conlangs, as a realistic and potentially viable language with enough structure and pattern to actually be learned, there must at least be more data than what Smith provided. To provide this data, a number of phonological methods can be used on the corpus with which we are provided. It may be possible yet to scientifically prove Quenya’s “flowing” and “smooth” properties. But it is not simply enough to generally relate the arbitrarily “most beautiful of European languages” of Italian and Spanish to Quenya, without a means of quantifying this relationship.

5 Data and Phonetic Analysis

Extracting a large enough cluster of Quenya data for analysis is, of course, the first challenge. Rather than selecting the same short poem as Smith, “Oilima Markirya,” I chose instead to focus on “Namárië,” an equally substantial text in The Fellowship of the Ring. This decision was made due to the fact that “Namárië,” unlike “Oilima Markirya,” is used in the narrative by a native speaker of the language, rather than serving as part of a secondary text written by Tolkien after publication of The Lord of the Rings. Lady Galadriel speaks this poem as the hobbit Frodo and his companions set out from Rivendell on their journey to Mordor, in Book 2, Chapter VIII (“Farewell to Lórien”).
In the poem, the number of consonants (195 tokens) is only marginally greater than the number of vowels (183, consisting of 174 monophthongs and 9 diphthongs). It appears consonant and vowel count is relatively even from line to line, with a mean, median, and mode of tokens of consonants and vowels per line of the poem all being nearly exactly 13 and 12, respectively.

In the next few subsections, I will enumerate the linguistic characteristics of Tolkien’s Quenya, showing the way this language illustrates the properties of a “smooth, flowing… light and melodious language,” of the sort Smith (2010) describes. Through phonological analysis and comparisons of phonemes in the text, key tendencies, preferences, and requirements of Quenya can be seen: the frequency of sonorants and front vowels, open syllables with an onset, lack of consonant clusters, and low numbers of syllables per word. These linguistic attributes combine to paint the sort of picture of Quenya that Smith professes, but does not rigorously articulate.

**i. Frequency Count of Phonemes**

Looking at consonants and vowels separately, the distribution for each phone is much less even. Figures 5 and 6 (consonants) and 8 and 9 (vowels) numerically illustrate the frequency counts for all phonemes both graphically and numerically.
Figure 5: Graph of Consonant Frequency

<table>
<thead>
<tr>
<th>/n/</th>
<th>/r/</th>
<th>/l/</th>
<th>/m/</th>
<th>/t/</th>
<th>/s/</th>
<th>/j/</th>
<th>/d/</th>
<th>/k/</th>
<th>/h/</th>
<th>/r/</th>
<th>/p/</th>
<th>/f/</th>
<th>/b/</th>
<th>/kw/</th>
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<tr>
<td>38</td>
<td>36</td>
<td>30</td>
<td>19</td>
<td>16</td>
<td>15</td>
<td>10</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 6: Consonant Frequency Data

The top three consonant phonemes are /n/, /r/, and /l/, all three of which are alveolar sonorants, and which comprise over half of all consonants in the text (103 of the 195 consonants). After this clear preference for alveolar sonorants, the usage of consonants slopes down gradually, with the labial obstruents /p/, /f/, and /b/ and the complex coarticulated sound /kw/ being relatively rare, with only one or two tokens each in the entire text.

The sonority hierarchy plays a particularly interesting role in understanding this section of data. As some consonants are more sonorous than others, they function more like vowels. Phonemic classification of consonant sounds in the sonority hierarchy can be separated into two categories: sonorants and obstruents. Sonorants like /w/, /j/, /l/, /r/, /n/, and /m/, are formed somewhat like vowels, allowing airflow to pass relatively freely.
when spoken. Obstruents like /p/, /b/, /d/, /h/, /k/, and /kʷ/ are formed by obstructing airflow. What is important to note here is that /l/, /r/, and /n/ are all sonorants—when comparing Tolkien’s use of sonorant consonants to obstruent consonants (stops and plosives), there is an obvious preference for sonorous phones. Sonorants are used a total of 135 times out of 195 total tokens of consonants, 69% of all consonant tokens. Stops and fricatives are used only 30 times each, throughout the poem. Tolkien seems to have used sonority as a chief principal in Quenya, preferring sounds with open airflow, which does account for Smith’s (2010) claim of a “flowing” language. Tolkien’s unmistakable preference for sonorants and vowels over obstruents shows his desire to keep his language moving.

Natural languages, as a general rule, possess this kind of uneven distribution of consonant phonemes in a downward trend, much like Quenya shows in Figure 5. In 1935 the philologist G.K. Zipf proposed a statistical method to graph word and phoneme frequency charts. From his groundbreaking research onwards, linguists have been concerned with developing the most accurate formula to predict the downward sloping trend of word and phoneme frequency graphs, adding onto Zipf’s research or suggesting models of their own. While it is unclear which formula (Zipf’s, or a host of others’) provides the most accurate curve of phoneme frequency, all maintain that phoneme frequency is uneven and decreasing (Tambovtsev and Martindale 2007). Strauss et al. (2006) offer the following as a universal claim for phoneme frequency formulas: “The ranked frequencies of phonemes follow a regular probability function or a regular monotone decreasing function.”
For a direct comparison of Quenya to an example natural language, I have taken a corpus of Japanese text (a language Tolkien never studied) and counted the frequency of each phoneme, graphing the results in Figure 7 below:

![Figure 7: Graph of Japanese Consonant Frequency](image)

The corpus of Japanese used above is from Harrison et al. 2004. As Figure 7 clearly shows, much like Quenya, Japanese possesses an uneven distribution of tokens of consonant phonemes, having an especially high number of a few consonants, and slowly tapering down in number to some consonants, which appear very infrequently. Quenya, therefore, follows the expected pattern of natural language, in having a negatively sloped graph of consonant frequency.

As vowels too are phonemes, it is to be expected that vowels would also have the negatively sloped phoneme frequency graph. Figure 8 below shows the results from “Namárië”:
The values in Figures 8 and 9 include both the long and short vowel tokens under each quality for Quenya. Long and short vowels tokens are listed separately in Figure 10.

“Namárië” also makes use of both short and long vowels for all monophthongs, indicating this orthographically with an accent marking over long vowels.
Looking at the graph of tokens of vowels in the same corpus of Japanese as in Figure 7, the results once again look similar to Quenya, in the way in which graphs of the figures are sloped. Both Japanese and Quenya possess an uneven distribution of vowel phonemes, with a high number of a few phonemes, and a downward trend towards vowels that appear with little frequency. The fact that uneven consonant and vowel phoneme frequency appears so clearly in Quenya also helps to point towards Quenya’s behaving as a natural language would, a hallmark of a successful conlang.

The use of long vowels in this text is relatively limited, compared to the use of short vowels, and even the least-used short vowel /o/ appears with greater frequency than any long vowel. Only 13% of the monophthong tokens were long, which shows that while both appear with reasonable frequency, Quenya has a strong dispreference for long vowels.

The most common vowel quality in “Namárië” is overwhelmingly the open vowel /a/, with 58 tokens (over 30% of the total vowel count), followed by /i/ and /e/, with 44 and 39 tokens, respectively. These three sounds (/a/, /i/, and /e/) are either front or central vowels, and together make up 141 of the 183 vowels in the entire text, which is
approximately 77%. Back round vowels like /o/ and /u/ were used 16 and 17 times each (a mere 18% of total vowels), showing a clear preference for front and central vowels, with a tendency towards an open central vowel.

Tolkien’s decision to prefer front and central vowels is also telling—front vowels are formed with the front of the tongue. As part of the articulation of these vowels, the lips are spread far more than the round vowels /o/ and /u/. Tolkien most frequently used vowel-like consonants and front unrounded vowels to form his words, which indicates a desire to move quickly from word to word, and a preference for an unrestricted, unrounded vowel sound. Open vowels like /a/ are also the most sonorous, as they allow the most unrestricted air to pass through the mouth and lips. Front and central vowels, too, are sometimes called “bright” vowels, in contrast with the “dark” back vowels—perhaps this is what Smith was referring to, when he called Quenya “light and melodious.”

ii. Syllabification

Tolkien’s appendices to The Lord of the Rings, while useful for gathering phonemes, mentions very little about syllable formation, or clusters in Quenya, specifically. Therefore, it is difficult to use these appendices to fully ascertain Tolkien’s intentional syllabification of each text. However, syllabification usually follows a set of universal guidelines, to which “Namárië” at least appears to adhere: all syllables have a nucleus (which, in the case of Quenya, is always a vowel), and all syllables prefer onsets to codas (Hall 2004). An educated guess for the syllabification of the poem, therefore, is included in the Appendix.
In “Namárië,” geminate consonants appear a total of ten times: /ll/ occurs 5 times, /ss/ occurs 4 times, and /nn/ occurs just once. Geminate consonants do not occur word-initially or word-finally in Quenya, indicating that geminates must occur across a syllable boundary. Therefore, when considering syllabification for geminate consonants, all were split up between syllables, counting as both a coda and an onset, in accordance with basic syllable formation (Bolozky 2004).

“Namárië” has a total of 194 syllables, of which 131 (67.5%) are open (having no coda), and 63 (32.5%) are closed (having a coda). This demonstrates a strong preference for open syllables. Even more interestingly, only a set few of Tolkien’s consonants are permitted as codas: /m/, /n/, /r/, /l/, /s/, and /t/ are all possible codas. But for word-final codas, only /n/, /r/, and /t/ are permitted. The stop /t/ is unusual here among the otherwise sonorant phones /r/ and /n/, although it appears only twice, in the words máryat [ma:.r'at] and met [met], which are both placed immediately before onsetless syllables in the proceeding words Elentári [e.len.ta.ri] and ar [ar]. Bilabial stops like /p/ and /b/ are entirely excluded as codas, as is the coronal stop /d/ and the complex coarticulated /r̩/ or /kʷ/.

Considering onsets, the situation reverses. Out of the 194 syllables available in this text, 156 of them (80.4%) began with consonants, spanning all possible consonants in the IPA chart above (and excluding geminates). Word-initial consonants did not include voiced stops /d/ or /b/, or the complex coarticulated /r̩/ or /kʷ/.

It is also important to note that the most common, default syllable structure for languages in general is CV. Tolkien, whether consciously or not, drew upon this
universal tendency for Quenya, with 110 of all Quenya syllables in CV structure (nearly 57% of all syllables).

This preference for onsets and dispreference for codas helps to illustrate the even spacing of consonants and vowels in the text. Because most syllables begin with a consonant, but are open, vowels in one syllable and onset consonants in the next syllable are able to run together, and speech can progress quickly from one phone to the other. The use of geminates, too, allows for this movement: if the syllable-final consonant is a geminate consonant, then it serves as the onset of the next syllable, making the articulation of the consonants—and therefore the movement from one syllable to the next—progress quickly, and more fluidly. This also plays into consonant cluster formation.

### iii. Clusters

Based on my syllabification of the data, there are no tautosyllabic consonant clusters in Quenya. Onsets and codas can only have one consonant each. The phones /rj/ and /kw/ are pronounced as one sound, so they are not considered clusters. Geminate consonants, as discussed in 5.ii, are split across a syllable boundary, and therefore do not function as tautosyllabic clusters.

It may be because of this lack of significant consonant clusters in Quenya, in addition to the preference for sonorant phones and open syllables, that Smith believes the language to be “flowing.” Without tautosyllabic clusters, and with therefore relatively even spacing of the consonants and vowels within a word (either CVC, CV, VC, or V as
possible syllables), Quenya can be read quickly, with one syllable preceding the next in rapid succession.

iv. Syllables Per Word

Another one of Smith’s claims is that “long words in the style of German or Greek are excluded; the maximum word length in the poem is four syllables, and most have three or less.” While this may be true for the poem Smith used, we must look at “Namárië” to ascertain the validity of the claim, counting all syllables per word. The number of syllables per word appears in Figure 12:

<table>
<thead>
<tr>
<th></th>
<th>1 σ</th>
<th>2 σ</th>
<th>3 σ</th>
<th>4 σ</th>
<th>5 σ</th>
<th>6 σ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21</td>
<td>25</td>
<td>18</td>
<td>13</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 12: Table of Syllables Per Word

The highest proportion of words in “Namárië” are two syllables or less (with a slight tendency towards two syllables). About 57% of words in this text are one or two syllables long. There are only three words with more than four syllables, only one of which is a six-syllable word. While it may be true that small words are the tendency, Smith’s claim that the longer words are excluded entirely is too broad.

v. Tolkien’s Vowel Formants

As Tolkien is the creator and first speaker of the original Quenya, any attempt to judge this language is nearly entirely based around the study of Tolkien himself. Since Tolkien’s death in 1973, scholars of Tolkien have had much difficulty analyzing Quenya with the same tools that natural language anthropologists and linguists can use. However, as a part of the creation of *The Lord of the Rings* song cycle book “The Road Goes Ever
On,” by Donald Swann (1967), Tolkien recorded recitations of several poems, including “Namárië.” These recordings permit us to study and measure Tolkien’s own vowel formants for speaking Quenya.

Praat (Boersma and Weenick 2012) was used to measure vowel formants. Although 7.7 seconds of recorded audio (equivalent to 2.5 lines of poetry in the published version of “Namárië” in The Lord of the Rings: The Fellowship of the Ring) do not match the original text of the poem, the rest of the recording is consistent with the text.

Figure 13: First and Second Formants, Graph

Figure 13 is a graph of the first and second formants of all vowels spoken in this recording of Tolkien. This figure graphs the log of Formant 1 (on the y-axis) and the log of Formant 2 (on the x-axis), showing all tokens of vowel phones, in the colors to which they are assigned. All vowels of a particular type are also plotted with a large dot in the
same color, which illustrates the average point on the graph for the F1 and F2 values of all tokens.

For natural languages, graphs such as these often look similar to vowel charts (see Pg. 10 for the vowel chart of Quenya). Long vowels usually are spread out at the edges of the graph, with short vowels more towards the center of the chart. Looking at Figure 13, therefore, we can see that Quenya looks roughly like a natural language would, with the averages of long vowels like /oː/, /uː/, /iː/, and /aː/ at the edges of the plot, and the short vowels more centralized. Apart from a few outliers that appear to have the wrong F1 and F2 values for their orthographic representation, this data appears largely consistent with similar graphs of recordings in other languages. This graph demonstrates that Tolkien has therefore done something remarkable with Quenya: his creation of a system of phones and mastery of his craft has allowed him to transform written language to speech in the same way a native speaker does. And when spoken by Tolkien, Quenya appears to be spoken like a natural language would. It may be that Tolkien was subconsciously utilizing his knowledge of natural languages to grant Quenya certain qualities typical of a natural language, but an in-depth study of Tolkien’s cognitive linguistic use of universal natural language behaviors is beyond the scope of this paper.

6 Phonological Analysis

Beyond the small picture of individual phonemes and clusters, there are ways to extend analysis of “Namárië” and Quenya to cover a more complete range of language tests. Tolkien insisted his Elvish languages were designed with universal aesthetic pleasure in mind, combining the pleasing linguistic patterns in many languages into a
kind of enjoyable ‘superlanguage.’ While beauty may be subjective and therefore
difficult to quantify, there are a few rigorous ways to measure such things as vowel
harmony in a text, something that may indicate a higher level of aesthetic appeal within
“Namárië.”

i. Vowel Harmony

Vowel harmony is a phonological process, seen in languages like Turkish
(Khalizadeh 2010) and Finnish (Suomi 1997). In these languages, vowels in close
proximity to each other have a tendency to be of the same phonological group (e.g., all
front vowels or all round vowels). Like the enjoyable effect of rhyme in poetry, vowel
harmony is arguably aesthetically pleasing to some.

Using a statistical algorithm created by Sanders and Harrison (2012), we can
calculate the levels of vowel harmony in a given text, represented as three different z-
scores, which measure backness, height, and rounding. The critical values for significant
vowel harmony are -2 and 2, meaning that a text with a z-score in a category that is
between -2 and 2 is not considered to have significant vowel harmony.

In running the vowel test for “Namárië,” it appears that Quenya has little vowel
harmony—there is little statistical significance for the applicable z-scores. “Namárië”
scored a 0.96 for backness, -1.92 for height, and 0.43 for rounding, showing only a slight
tendency towards significant anti-harmony for vowel height. All figures, however, are
beneath the critical cutoff for significant harmony values, so it appears this trait, so
common in Finnish, was not borrowed by Tolkien for the use in Quenya. However,
because “Namárië” is not a large corpus, the z-scores might change when considering a
larger pool of data, which might reveal different aspects of the language than the short poem “Namárië” alone can. Vowel height, in particular, is only .08 away on the critical z-score for significance, so it is possible that a larger Quenya corpus would push this anti-harmony figure into statistical significance.

7 Conclusions

J.R.R. Tolkien, truly a master of the linguistic experiment, took the task of playing with languages seriously. From all avenues explored in Sections 5 and 6, it can be seen that Tolkien intentionally manipulated several fundamentals of language (phoneme selection, cluster and syllable formation, and phonological properties) to test his theory of linguistic aestheticism, while remaining close to the behaviors and tendencies of “real-life” languages. The success of his attempts to create a lifelike language with the specific properties he intended are evident in the frequency of the phonemes themselves (tendency for sonorous, short sounds) and in how phonemes combine (no tautosyllabic clusters, tendency for CV syllables, few syllables per word). It appears that while Smith (2010) came to conclusions on Quenya that may not have been fully supported in his methods or technical in his language, perhaps the claims made there were not entirely inaccurate—looking at one particular poem, the language does flow, progressing quickly from one sound and syllable to another. Even so, we must be careful to remember that “Namárië” is a poem, and therefore its words have been selected for special aesthetic effect—this may explain why the words used are particularly “flowing,” “light,” and “melodious.” But the fact remains that, at least for “Namárië,” the
ideas expressed in Quenya are done so in an effective, consistent way that truly does mimic natural languages. Tolkien’s linguistic experiment here undoubtedly is a success.

This thesis is by no means the single authoritative work on Quenya, and I encourage anyone interested in Quenya, Elvish, or Tolkien’s conlanging to explore the References section. Further study into Tolkien’s notes, Elvish tongues, vowel length, and especially direct comparisons of Quenya and Sindarin to the linguistic behaviors of real languages, especially Tolkien’s favorites of Finnish and Welsh, would advance the work done in this thesis. Exploring the manner in which Tolkien’s books are translated into other languages would also further the research done here.

Additionally, it is clear that the narrative and world in which Tolkien situated his languages are both influenced heavily by linguistic aesthetic. Tolkien should be called neither ‘just a linguist’ nor ‘just a writer’: his languages were developed through his linguistic background, and presented to the public through the medium of literature, so there is no separation between the two. The Elvish languages and the characters that speak them in Tolkien’s *The Lord of the Rings* are granted special treatment, so analysis of the characters themselves can take into account the manner in which their language behaves linguistically and culturally. For a literary perspective on Tolkien’s Quenya, the Elvish people, and the poem “Namárië,” see Ryan (2014).
**PARTIAL J.R.R. TOLKIEN BIBLIOGRAPHY**


REFERENCES: WORKS CITED


APPENDIX

“Namárië,” or “Galadriel’s Lament at Lórien”
(Tolkien 1954)

Ai! laurië lantar lassi súrinen,  
ai lau.ri.e lan.tar las.si su.:ri.nen  
_Ah! Like gold fall the leaves in the wind_,

yéni únótimë ve rámar aldaron!  
je:.ni u:.no:.ti.me ve ra:.mar al.da.ron  
_long years numberless as the wings of trees_

Yéni ve linté yuldar avánier  
je:.ni ve lin.te jul.dar a.va:.ni.er  
_The years have passed like swift draughts_

mi oromardi lisse-miruvóreva  
mí o.ro.mar.di lis.se mi.ru.vo:.re.va  
_of the sweet mead in lofty halls beyond the West_

Andúnë pella, Vardo tellumar  
an.du:.ne pel.la var.do tel.lu.mar  
_beneath the blue vaults of Varda_

nu luini yassen tintilar i eleni  
nu lui.ni jas.se:n tin.ti.lar i e.le.ni  
_wherein the stars tremble in the song of her voice_

ómaryo airetári-lirinen  
o:.ma.r'o ai.re.ta:.ri li.ri.nen  
_holy and queenly_

Sí man i yulma nin enquantuva?  
sí: man i jul.ma nin en.kʷan.tu.va  
Who now shall refill the cups for me?

An sí Tintallë Varda Oiolossëo  
an si: tin.tal.le var.da oi.o.los.se.o  
_For now the Kindler, Varda, the Queen of the Stars_

ve fanyar máryat Elentári ortanë,  
ve fan.jar ma:.r'at e.len.ta:.ri or.ta.ne  
_from Mount Everwhite has uplifted her hands like clouds,_

ar ilyë tier undulávë lumbulë;
and all paths are drowned deep in shadow

and out of a grey country darkness lies

on the foaming waves between us, and mist

covers the jewels of Calaciryo forever.

Now lost, lost to those from the East is Valimar!

Farewell! Maybe thou shalt find Valimar.

Maybe even thou shalt find it. Farewell!